

Application No.: 09/479,736
Reply to Office Action of January 25, 2006
Supplemental Amendment Dated April 20, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A system for providing real-time voice communication between devices connected to an Internet Protocol (IP) network and devices connected to a public switched telephone network (PSTN), comprising:

a computer controlled switch operable for use by subscribers and adapted for connection to a local public switched telephone network, ~~and capable of~~ receiving calls from the IP network and the PSTN, and routing calls to the PSTN and the IP network; and

gate interface circuitry connected to the computer controlled switch and adapted for connection to the IP network;

said computing controlled switch containing, for each subscriber, destination addresses on the PSTN and the IP network;

whereby calls to a subscriber received by the computer controlled switch are automatically routed to each destination address on the PSTN or the IP network for that subscriber,

wherein said computer controlled switch receives an incoming call from the IP network or the PSTN and simultaneously routes the call to a plurality of pre-designated destination addresses ~~which may be~~ on the IP network, on the PSTN, or on both the IP network and the PSTN.

2. (Original) The system of claim 1 wherein said gate interface circuitry includes gateway circuitry for interfacing between the IP network and the voice circuits of the PSTN, and gatekeeper circuitry for performing address translation, admission control, bandwidth management and zone management between the IP network and the PSTN.

Application No.: 09/479,736
Reply to Office Action of January 25, 2006
Supplemental Amendment Dated April 20, 2006

3. (Original) The system of claim 2, further comprising:
a voice response unit connected between the gate interface circuitry and the switch for receiving voice signals and converting them to digital tones for the switch.
4. (Original) The system of claim 3, further comprising a message system connected to the IP network and the switch.
5. (Original) The system of claim 4 where said message system receives voices messages and converts them to e-mail messages.
6. (Original) The system of claim 5 wherein said message system receives facsimile messages and converts them to e-mail messages.
7. (Original) The system of claim 6 wherein said message system receives e-mail messages and converts them to voice messages.
8. (Original) The system of claim 7, wherein the devices connected to the IP network are computers or telephones with a gateway circuitry interface.
9. (Original) The system of claim 8 wherein the computers connected to the IP network include multi-media software for packetizing voice signals into a digital format for transmission over the IP network.
- 10-11. (Canceled)
12. (Previously Presented) The system of claim 1, wherein said computer controlled switch performs caller identification functions after routing the incoming call.

Application No.: 09/479,736
Reply to Office Action of January 25, 2006
Supplemental Amendment Dated April 20, 2006

13. (Original) The system of claim 1 wherein said computer controlled switch performs Class 5 switching of incoming calls.

14. (Currently Amended) A method of providing real-time voice communication between devices connected to an Internet Protocol (IP) network and devices connected to the public switched telephone network (PSTN), the steps of the method comprising:

interfacing the digital data signals of the IP network with the voice signals of the PSTN;
interfacing the control signals of the IP network with the PSTN to perform address translation, admission control, bandwidth management and zone management;
routing calls between the devices connected to the IP network and devices connected to the PSTN;

maintaining information corresponding to subscribers;

storing for each individual subscriber destination addresses on the PSTN and the IP network;
automatically routing calls to a subscriber to each destination address stored for that subscriber, and

receiving an incoming call from the IP network or the PSTN network and simultaneously routing the call to a plurality of predesignated destinations which may be on the IP network, on the PSTN network, or on both the IP network and the PSTN network.

15. (Original) The method of claim 14, further comprising receiving voice signals from the IP network and converting them to signals for use by the PSTN.

16. (Original) The method of claim 14, further comprising receiving voice messages and converting them to e-mail messages.

Application No.: 09/479,736
Reply to Office Action of January 25, 2006
Supplemental Amendment Dated April 20, 2006

17. (Original) The method of claim 14, further comprising receiving facsimile messages and converting them to e-mail messages.

18. (Original) The method of claim 14, further comprising receiving e-mail messages and converting them to voice messages.

19. (Canceled)

20. (Previously Presented) The method of claim 14, further comprising performing caller identification functions after routing the incoming call.

21. (Currently Amended) A system for providing real-time voice communication between devices connected to an Internet Protocol (IP) network and devices connected to a public switched telephone network (PSTN), comprising:

a computer controlled switch adapted for connection to the public switched telephone network, ~~and capable of~~ receiving calls from the IP network and the PSTN, and routing calls to the PSTN and IP network; and

gate interface circuitry connected to the computer controlled switch and adapted for connection to the IP network,

wherein the computer controlled switch is operable to simultaneously route a received call to a plurality of pre-designated destination addresses comprising ~~at least one one or more~~ IP address and ~~at least one one or more~~ PSTN number[[s]].

22. (Previously Presented) The system of claim 21, wherein said computer controlled switch is operable to perform Class 5 switching of incoming calls.

Application No.: 09/479,736
Reply to Office Action of January 25, 2006
Supplemental Amendment Dated April 20, 2006

23. (Previously Presented) The system of claim 21 wherein said gate interface circuitry includes gateway circuitry for interfacing between the IP network and the voice circuits of the PSTN, and gatekeeper circuitry for performing address translation, admission control, bandwidth management and zone management between the IP network and the PSTN.

24. (Currently Amended) A method of providing real-time voice communication between devices connected to an Internet Protocol (IP) network and devices connected to [[the]] a public switched telephone network (PSTN), the method comprising:

interfacing the IP network and the PSTN;

receiving a call originating from a source selected from the group consisting of the IP network and the PSTN; and

routing the call simultaneously to a plurality of predesignated destination addresses comprising at least one one or more IP address and at least one one or more PSTN number[[s]].

25. (Previously Presented) The method of claim 24, further including performing class 5 switching of the received call.

26. (Previously Presented) The method of claim 24, further including performing address translation, admission control, bandwidth management and zone management between the IP network and the PSTN.

Application No.: 09/479,736
Reply to Office Action of January 25, 2006
Supplemental Amendment Dated April 20, 2006

27- 37. (Canceled)

38. (Currently Amended) A system including:

a telephone operable to provide depacketized voice information; and

a customer premise equipment gateway locally connected coupled with the telephone, the gateway operable to packetize the depacketized voice information to form packetized digital voice data, couple with the Internet without utilizing a private branch exchange (PBX), couple with a computer controlled switch through the Internet, an Internet Protocol (IP) network, and provide the packetized digital voice data to the computer controlled switch to enable the telephone to communicate through the Internet IP network and a public switched telephone network (PSTN).

39. (Previously Presented) The system of claim 38, wherein the computer controlled switch is a class 5 switch.

40. (Previously Presented) The system of claim 38, wherein the computer controlled switch is coupled with gate interface circuitry to facilitate communication through the PSTN.

41. (Previously Presented) The system of claim 38, wherein the computer controlled switch is operable for use by subscribers and the gateway is operable to provide subscriber information to the switch.

42-56. (Canceled)

Application No.: 09/479,736
Reply to Office Action of January 25, 2006
Supplemental Amendment Dated April 20, 2006

57. (New) A customer premise equipment gateway for enabling a telephone to communicate through the Internet and a public switched telephone network (PSTN), the gateway operable to-
locally connect with the telephone to receive depacketized voice information therefrom;
packetize the depacketized voice information to form packetized digital voice data;
couple with the Internet without utilizing a private branch exchange (PBX);
couple with a computer controlled switch through the Internet; and
provide the packetized digital voice data to the computer controlled switch to enable the telephone to communicate through the Internet and the PSTN.

58. (New) The gateway of claim 57, wherein the computer controlled switch is a class 5 switch.

59. (New) The gateway of claim 57, the gateway being further operable to provide subscriber information to the computer controlled switch.

60. (New) The gateway of claim 57, the gateway being further operable to-
receive packetized digital voice data from the computer controlled switch through the Internet,
depacketize the received packetized digital voice data to form depacketized voice information, and
provide the depacketized voice information to the telephone.

61. (New) A system for providing real-time voice communication, the system comprising:

a customer premise equipment gateway operable to-

couple with the Internet without utilizing a private branch exchange (PBX),
locally connect with a telephone to receive depacketized voice information
therefrom, and
packetize the depacketized voice information to form packetized digital voice data;
and

a computer controlled switch operable to-

couple with the Internet and a public switched telephone network (PSTN),
receive the packetized digital voice data from the gateway,
determine a subscriber destination address corresponding to packetized digital voice
data, and
if the determined destination address of the call corresponds to the PSTN,
depacketize the packetized digital voice data to form depacketized voice
information and route the depacketized voice information to the PSTN to
enable real-time voice communication between the telephone and a device
coupled with the PSTN.

62. (New) The system of claim 61, wherein the computer controlled switch includes gate
interface circuitry to facilitate depacketization of the packetized digital voice data.

63. (New) The system of claim 61, wherein the computer controlled switch is further
operable to-

if the determined destination address of the call corresponds to the Internet, route the
packetized digital voice data to the Internet to enable real-time voice communication
between the telephone and a device coupled with the Internet.

Application No.: 09/479,736
Reply to Office Action of January 25, 2006
Supplemental Amendment Dated April 20, 2006

64. (New) The system of claim 61, wherein the gateway is further operable to provide subscription information and the computer controlled switch is operable to receive the subscription information and route information according to the received subscription information.

65. (New) The system of claim 61, wherein the computer controlled switch is a class 5 switch.

66. (New) The system of claim 38, wherein the gateway is further operable to-
receive packetized digital voice data from the computer controlled switch through the
Internet,

depacketize the received packetized digital voice data to form depacketized voice
information, and

provide the depacketized voice information to the telephone.